

---

## Contents

<b>1</b>	<b>Introduction</b>	1
1.1	The Automorphism Group as a Lie Group	1
1.2	The Classification Problem	4
1.3	A Lacuna in Automorphism Group Dimensions	7
1.4	Main Tools	9
<b>2</b>	<b>The Homogeneous Case</b>	23
2.1	Homogeneity for $d(M) > n^2$	23
2.2	Classification of Homogeneous Manifolds	24
<b>3</b>	<b>The Case <math>d(M) = n^2</math></b>	29
3.1	Main Result	29
3.2	Initial Classification of Orbits	32
3.3	Real Hypersurface Orbits	34
3.4	Proof of Theorem 3.1	42
<b>4</b>	<b>The Case <math>d(M) = n^2 - 1</math>, <math>n \geq 3</math></b>	51
4.1	Main Result	51
4.2	Initial Classification of Orbits	52
4.3	Non-Existence of Real Hypersurface Orbits	55
4.4	Proof of Theorem 4.1	59
<b>5</b>	<b>The Case of (2,3)-Manifolds</b>	61
5.1	Examples of (2,3)-Manifolds	62
5.2	Strongly Pseudoconvex Orbits	79
5.3	Levi-Flat Orbits	90
5.4	Codimension 2 Orbits	106
<b>6</b>	<b>Proper Actions</b>	121
6.1	General Remarks	121
6.2	The Case $G \simeq U_n$	126

VIII Contents

6.3 The Case $G \simeq SU_n$ .....	129
<b>References</b> .....	131
<b>Index</b> .....	137

<http://www.springer.com/978-3-540-69151-8>

Lectures on the Automorphism Groups of  
Kobayashi-Hyperbolic Manifolds

Isaev, A.

2007, VIII, 144 p. With online files/update., Softcover

ISBN: 978-3-540-69151-8